IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

VERSUS TECHNOLOGY, INC.,	)	
	)	
Plaintiff,	)	
	)	
v.	)	Civil Action No. 04-1231-SLR
	)	
RADIANSE, INC.	)	
	)	
Defendant.	)	

AFFIDAVIT OF PAUL TESSIER IN SUPPORT OF RADIANSE'S MOTION FOR SUMMARY JUGDMENT

1. My name is Paul Tessier. I make this affidavit on the basis of my personal knowledge.

2. I am the Vice President of Engineering for Radianse, Inc. (Radianse) and am a co-founder of Radianse. In this role I am responsible for all product development for Radianse. I directly manage the Radianse engineering organization. I have directly contributed to and have personal knowledge of the architecture and design of Radianse's products. I am listed as an Inventor on many of the Radianse patent applications. All of Radianse's commercial products have been developed under my leadership.

3. Radianse manufactures and sells the Radianse Indoor Positioning System (IPS).

4. I am fully familiar with the design and method of operation of the Radianse IPS.

5. The Radianse IPS accurately and continuously tracks the location of assets or people in virtually any indoor environment. The Radianse IPS is based on a proprietary technique developed by Radianse to identify and determine the location of objects indoors. The Radianse IPS is comprised of four parts – a small, inexpensive, battery-powered transmitter

called an ID Tag, a receiving unit called a Receiver, a wired or wireless network, and application software.

6. ID Tags are small devices that transmit unique identification codes and status information by means of radio frequency (RF) transmissions. These ID tags are worn by individuals or attached to assets to be tracked.

7. RF transmissions have different physical properties and characteristics from transmissions that are "light based" such as IR transmissions. RF transmissions are of a different wavelength than IR transmissions. In the case of conventional building construction, RF transmissions are not blocked by opaque objects such as walls. IR and other light based transmissions are blocked by opaque objects such as walls.

8. RF transmission is more power efficient that IR transmission. ID Tags using RF transmitters to transmit unique tag identifying codes are typically less expensive than ID Tags using IR transmitters, since IR transmitters must use larger batteries and/or power management circuitry such as motion detectors.

9. Signals from the ID Tags are received by Receivers. Receivers are placed at various locations around a facility and connect directly to the facility's network. Receivers process the signals received from the ID Tags then send the data to a PC running Radianse software.

10. The Radianse software contains a proprietary algorithm to identify and determine the location of ID Tags, which it then makes available through a web interface, sends to existing customer databases/applications, or sends on to other value-added applications via XML.

11. In the Radianse IPS, ID Tags are identified by signals that are transmitted in the form of RF packets that are sent as 80 bits of Manchester encoded data. In particular, each RF packet includes a 32 bit unique identification of the ID Tag.

12. In addition to providing unique identification information for the ID Tag, the RF signal transmitted by the ID Tag in the Radianse constitutes the primary information used by the Radianse IPS software to locate the ID Tag.

13. The ID Tags in the Radianse IPS do not transmit identification information by means of IR.

14. The Radianse IPS does not determine the identification of ID Tags by means of IR transmissions.

15. The RF transmissions from ID Tags in the Radianse IPS are followed by the transmission of a short IR signature in standard industry format that does not contain identification information and that is not unique to Radianse. The IR signal can only be received if a valid RF packet is received. The IR signal has no relevance or meaning by itself.

16. The IR signal transmitted by the ID Tags in the Radianse IPS does not identify the ID Tag.

17. The RF transmissions from ID Tags in the Radianse IPS provide the primary means by which the locations of the ID Tags are calculated by Radianse. The IR signals transmitted by the Radianse ID Tags provide supplementary location information.

18. The Radianse IPS requires the RF signal to locate and identify ID Tags, but does not require the IR signal either to identify or locate ID Tags.

19. In the Radianse IPS, Receivers are deployed with overlapping areas of signal reception. RF transmissions from an ID Tag are received by multiple Receivers. The received

strength (RSSI) from an ID Tag at a Receiver is proportional to the distance of the ID Tag from the Receiver. The RSSI value from an ID Tag is the primary means by which the locations of the ID Tags are determined by the Radianse system.

20. The use of ID Tags that transmit the unique TAG ID by means of RF enable multiple receivers in different rooms to receive a given tag transmission and enable Radianse to determine the location of the tag by means of RSSI. Such technology cannot be used where the tags transmit only IR signals.

21. Radianse's receivers are not sited so that the signal from a tag is received by only one receiver; Radianse does not use "area detection." Radianse's IPS is able to identify and locate tags that could not be identified and located by the use of IR transmissions from tags containing the unique Tag ID.

22. Signals from ID Tags are received to the limit of the noise floor of the environment and the Receiver. Radianse does not use limited area and extended area receivers. Reception of Tag signals at a Receiver is not limited to an assigned area. The coverage area of a Receiver can vary in different environments and over time.

23. Radianse Receivers transmit data packets to the Radianse Server on a regular, pre-determined schedule. Receivers send data packets to the Server independent of whether or not the Receiver has received signals from ID Tags. Transmission from a Receiver is independent of ID Tag transmission and Server operations. For purposes of determining Tag location, Radianse's Receivers do not provide output resulting from or triggered by the receipt of a Tag transmission.

24. Radianse's IPS does not have a processor that performs the functions of (1) recording electrical signals which are representative of unique identifying codes transmitted by

means of IR from transmitters; (2) recording the receiver which determined that such electrical signals are representative of the unique identifying codes associated with said IR transmitters; or (3) determining in which of said areas said IR transmitters are located.

25. The Radianse Server does not scan Receivers for information and the Receivers do not send packets in response to receiving a signal from an ID Tag. Radianse's system does not employ a controller to collect information packets from Receivers. Receivers themselves transmit data, which is sent directly to the Server.

26. The Radianse Server does not accumulate with respect to each IR transmitter those areas in which receivers have determined that an electrical signal is representative of the unique identifying code associated with that particular IR transmitter.

27. The Radianse Server does not accumulate a badge count for each accumulated area

28. The Radianse system does not maintain a count or record of the number of times a Receiver receives a signal from an ID Tag.

29. Receivers communicate with the Server using a fixed protocol. Data from the Receiver is always sent in the same format and is sent in its entirety so there is no need to identify what data is being sent. Radianse does not use a variable-based protocol that implements object identifier variables. The Radianse Server does not employ a Management Information Base (MIB) in which variables are assigned to information to be communicated and new variables are assigned when additional information needs to be conveyed. With the Radianse system, there is no provision for getting or sending variables over the network using object identifiers. In contrast, Radianse sends all the information available from a device with each transmission from that device. No object identifiers are required, since the sequence is

always the same and the data elements are always of the same length. Radianse does not use SNMP or anything like SNMP.

30. Radianse's Receivers connect directly to a computer network and do not require or use an external device controller.

31. Radianse's Receivers do not have a converter for converting a transmitted light-based signal to an electrical signal.

32. Radianse's receivers do not have a validation circuit for processing an electrical signal converted from a light-based signal to determine whether said electrical signal are representative of the unique identifying code associated with transmitters that transmit a light-based signal representative of an identifying code unique to that transmitter.

33. Radianse's IPS does not have concentrators.

34. Radianse's IPS does not have collectors.

35. Radianse's IPS does not have interface circuitry that is contained in a concentrator that is connected on one side to a workstation PC and on the other side to collectors that are in turn connected to sensors.

36. Radianse's IPS does not use area detection packets.

37. Radianse's IPS does not generate extended area detection packets or limited area detection packets.

38. Radianse's IPS does not use extended area receivers or limited area receivers.

39. A comparison of the Radianse System to each asserted claim for the four patents at issue follows:

A. USP 5,027,314

Claim and Claim Element	Proposed Claim Construction	Radianse System

Clm 1. A system for tracking a number of **subjects** in a **plurality of areas comprising**:	A "subject" is an object or person to be tracked. A "plurality" is more than one. An "area" is a physical area inside a structure containing and associated with a receiver. "Comprising" means including.	
a plurality of **transmitters**, wherein at least one transmitter is **associated with** each of said subjects, each of said transmitters **comprising** transmission means for transmitting a **light based signal representative of an identifying code unique to that transmitter**;	A "transmitter" is a device that transmits a signal. "Associated with" means attached to related to "A light based signal" means a signal transmitted by means of infrared radiation. "Representative of" means containing. "An identifying code unique to that transmitter" means a code that identifies one and only one transmitter that is making the transmission. This is a means plus function limitation. The claimed function is "transmitting a light based signal representative of an identifying code unique to a transmitter." The disclosed structure that performs this function is a transmitter containing components performing each of the functions shown as blocks in Fig 2, i.e., a generator, a timer, a clock oscillator, a counter,	The Radianse IPS does not transmit signals by means of IR that contain a tag's unique identifying code. Rather, Radianse's tags transmit their unique ID codes by means of RF transmissions. The Radianse IPS does not perform the function of "transmitting a light based signal representative of an identifying code unique to a transmitter." The Radianse IPS does not have the structure set forth in the claim construction or an equivalent structure. The Radianse tags do not perform the identical function in substantially the same way to achieve substantially the same result, as set forth below. In the Radianse IPS, ID Tags are identified by signals that are transmitted in the form of RF packets that are sent as 80 bits of Manchester encoded data. In particular, each RF packet includes a 32 bit unique identification of the ID Tag. In addition to providing unique identification information for the ID Tag, the RF signal

	programmable memory (PROM), an amplifier, and an IR emitter. The PROM is programmed with a specific bit pattern which will generate a unique code in a binary number that is transmitted to an infrared emitter through an amplifier. The emitter converts the electrical signals making up the code of the binary numbers into signals of infrared radiation in a wavelength of from 900 to 10,000 nanometers.	transmitted by the ID Tag in the Radianse constitutes the primary information used by the Radianse IPS software to locate the ID Tag. The ID Tags in the Radianse IPS do not transmit identification information by means of IR. The Radianse IPS does not determine the identification of ID Tags by means of IR transmissions. The RF transmissions from ID Tags in the Radianse IPS are followed by the transmission of a short IR signature in standard industry format that does not contain identification information and that is not unique to Radianse. The IR signal can only be received if a valid RF packet is received. The IR signal has no relevance or meaning by itself. The IR signal transmitted by the ID Tags in the Radianse IPS does not identify the ID Tag. The RF transmissions from ID Tags in the Radianse IPS provide the primary means by which the locations of the ID Tags are calculated by Radianse. The IR signals transmitted by the Radianse ID Tags provide supplementary location information. The Radianse IPS requires the RF signal to locate and identify ID Tags, but does not require the IR signal either to identify or locate ID Tags. The use of RF rather than IR to transmit the unique identifying codes produces a different result from the patented configuration. RF signals are receivable in circumstances when IR signals

		are blocked.
a plurality of **receivers**, wherein at least one of said receivers is **associated with each of said areas**, each of said receivers comprising a converter for converting a transmitted **light based signal** to an **electrical signal** and a **validation circuit** for processing said electrical signal to determine whether said electrical signals are **representative of the unique identifying codes associated with said transmitters**; and	A "receiver" is an assembly containing a sensor that receives infrared radiation transmitted from transmitters and that synchronizes and decodes the transmitted data. "Associated with each of said areas" means that each receiver is contained within a specific "area". A "light based signal" is an infrared signal. An "electrical signal" is a signal that uses electricity. A "validation circuit" is an electrical circuit that validates binary numbered code output from infrared transmitters by comparing it with information stored in computer memory. "Unique identifying codes associated with said transmitters" means that each transmitter possesses an identifying code that is not possessed by any other transmitter.	The Radianse IPS does not have receivers that convert a transmitted light based signal to an electrical signal that have a validation circuit for processing said electrical signal to determine whether said electrical signals are representative of the unique identifying codes associated with said transmitters. The Radianse IPS does not transmit signals by means of IR that contain a tag's unique identifying code. IR is not used in the manner described and converted to an electrical signal and processed through a validation circuit to determine whether said electrical signals are representative of the unique identifying codes associated with said transmitters.
processor means, connected to each of said receivers, for recording those **electrical signals** which are **representative of** said **unique identifying codes**, for recording the	See above definitions of highlighted terms. "Scanning" means examining and obtaining information from multiple sources in an ordered sequence. "Accumulating" means forming the result of a mathematical or logical	Radianse's IPS does not have the claimed "processor means." Radianse's processor does not perform each of the recited functions of the claimed processor means. In particular, Radianse's processor does not "record those electrical signals which are representative of said unique identifying codes," or

receiver which determined that such electrical signals are **representative of** the **unique identifying codes** associated with said transmitters and for determining in which of said **areas** said transmitters are located, wherein said processor means comprises **scanning means for scanning said receivers** and **accumulating means for accumulating with respect to each transmitter those areas in which receivers have determined that an electrical signal is representative of the unique identifying code associated with that particular transmitter** and for **accumulating a badge count for each accumulated area, said badge count being representative of the number of times a receiver has determined**	operation. This limitation contains multiple and overlapping means plus function elements covering "processor means," "scanning means," and "accumulating means." The claimed functions of the "processor means" are: 1. recording electrical signals which are representative of unique identifying codes transmitted by means of IR from transmitters; 2. recording the identity of the receiver which determined that such electrical signals are representative of the unique identifying codes associated with said transmitters; and 3. determining in which areas the transmitters from which signals were received by the receiver are located. The disclosed structure of the claimed "processing means" includes a data processor separate from the system's central computer that receives data from multiple receivers that has already been processed by the receivers. The processor validates the multiple receiver data streams and combines the data into a	"record the receiver which determined that such signals are representative of the unique identifying codes." Radianse's processor does not "scan the receivers." Radianse Receivers transmit data packets to the Radianse Server on a regular, pre-determined schedule. Receivers send a packet to the Server independent of whether or not the Receiver has received signals from ID Tags. Transmission from a Receiver is independent of ID Tag transmission and Server operations. Radianse's processor does not "accumulate as to each transmitter those areas from which receivers have deterimined that a signal has been sent by the transmitter by converting that signal into an electrical signal that is representative of the unique identifying code associated with that transmitter." Radianse's processor does not accumulate a badge count as claimed. Radianse's IPS does not have the structure disclosed corresponding to such functions or an equivalent structure.

that an electrical signal is representative of the unique identifying code associated with that particular transmitter.	single data stream that it transmits to a separate central processing unit. The claimed function of the "scanning means" included in the "processor means" is scanning receivers. The disclosed structure of the claimed "scanning means" consists of receivers that receive transmissions of unique identification information from transmitters via infrared radiation, data processors that validate the identification information and store information in RAM memory, and a central processing unit that receives and stores such information and that periodically cycles through the task of requesting data from the data processors. The claimed functions of the "accumulating means" included in the "processor means" are: 1. accumulating as to each transmitter those areas from which receivers have determined that a signal has been sent by the transmitter by converting that signal into an electrical signal that is representative of the unique identifying code associated with that transmitter; and 2. accumulating a badge	

	count for each such area signifying the number of times a receiver has determined that a signal was sent by a specific transmitter. The disclosed structure of the "accumulating means" is a central processing unit that is connected to data processors that are connected to receivers that receive transmissions of unique identifier information from transmitters via infrared.	
Clm 9. A method for tracking a number of **subjects** in a **plurality** of **areas** in a system wherein at least one **transmitter** is **associated with** each of said subjects, each transmitter being capable of transmitting a **light based signal representative of an identifying code unique to that transmitter**, **comprising** the steps of:	See above for the definitions of the highlighted terms. This is a "step plus function" limitation in which the claimed tracking method is accomplished by steps of "converting," "recording," "determining," and "accumulating."	Radianse does not perform this method for the same reasons that it does not infringe claim 1 as set forth above.
converting, in a receiver, the transmitted light based signal to an **electrical signal** and **validating** said electrical signal to determine whether said	The claimed function of the step of "converting" is converting the infrared signal that contains a unique identification code and that is received by the receiver from the transmitter into an electrical signal.	

electrical signal is **representative of the unique identifying codes associated with said transmitter**;	The disclosed acts that perform this step are receiving, synchronizing and decoding the received infrared signal by means of infrared sensors as shown in Fig 5 that detect the infrared signals and convert the infrared radiation into an electrical signal, amplifiers that amplify the electrical signals, a computer that is part of the receiver that converts the encoded bit stream to a binary non-return-to-zero bit stream also provides a synchronizing clock signal, and then sending the converted serial data stream to the data processor.	
recording those electrical signals which are **representative of said unique identifying codes**;	The claimed function of the step of "recording electrical signals" is recording the electrical signals, after conversion, that correspond to the unique identifying codes initially received by means of infrared radiation from transmitters being identified. The disclosed acts that perform this step are transmitting the data stream to from the data processor to the central computing unit where the data are stored.	
recording the receiver which determined that such electrical signals are representative of the unique identifying codes associated with said transmitters; and	The claimed function of the step of "recording the receiver" is recording the receiver that received and validated the signal from the transmitter. The disclosed acts that perform this step are recording of code from the receiver's sensors and amplifiers in the	

	RAM memory of the data processor and the of data to the central processing unit from the data processing computer when the central processing unit requests it from the data processing computer, as shown in Fig 6.	
determining in which of said **areas** said transmitters are located, wherein the recording the receiver and the determining steps **comprise** the steps of **scanning** said receivers and **accumulating** with respect to each transmitter those areas in which receivers have determined that an electrical signal is representative of the unique identifying code associated with a particular transmitter and accumulating a **badge count** for each accumulated area, said badge count being representative of the number of times a receiver has determined that an electrical signal is representative of the unique	The claimed function of the step of "determining" is determining the areas in which specific transmitters are located, including scanning the receivers and accumulating information as to the identities of the transmitter and the number of times a receiver has received a transmission from that specific transmitter. The disclosed acts that accomplish this function are the storage of data regarding receipt of signals from individual transmitters in specific areas in the RAM memory of data processors, the requesting of data by the central processing unit from the data processors of the receivers, the transmission of data from the memory of the data processors to the central processing unit, and the repeated scanning of arrays of the data processors as set forth in Fig. 7.	

identifying code associated with the particular transmitter.		

B. USP 5,572,195

Claim and Claim Element	Proposed Construction	Radianse System
Clm 1. An object location and tracking system for tracking **infrared transmitters that transmit identifying codes, comprising**:	"Infrared transmitters that transmit identifying codes" are transmitters that transmit identifying codes using infrared. "Comprising" means including.	Radianse does not have "infrared transmitters that transmit identifying codes." Radianse uses RF transmitters to transmit identifying codes. In the Radianse IPS, ID Tags are identified by signals that are transmitted in the form of RF packets that are sent as 80 bits of Manchester encoded data. In particular, each RF packet includes a 32 bit unique identification of the ID Tag. In addition to providing unique identification information for the ID Tag, the RF signal transmitted by the ID Tag in the Radianse constitutes the primary information used by the Radianse IPS software to locate the ID Tag. The ID Tags in the Radianse IPS do not transmit identification information by means of IR. The Radianse IPS does not determine the identification of ID Tags by means of IR transmissions. The RF transmissions from ID Tags in the Radianse IPS are followed by the transmission of a short IR signature in standard industry format that does not contain identification information and that is not unique to Radianse. The IR signal can only be received if a valid RF packet is received. The IR signal has no relevance or meaning by itself. The IR signal transmitted by the ID Tags in the Radianse IPS does not identify the ID Tag.

		The RF transmissions from ID Tags in the Radianse IPS provide the primary means by which the locations of the ID Tags are calculated by Radianse. The IR signals transmitted by the Radianse ID Tags provide supplementary location information. The Radianse IPS requires the RF signal to locate and identify ID Tags, but does not require the IR signal either to identify or locate ID Tags. The use of RF rather than IR to transmit the unique identifying codes produces a different result from the patented configuration. RF signals are receivable in circumstances when IR signals are blocked.
a computer network for passing messages;	The words in this limitation have their ordinary meanings.	
a computer connected to said network, said computer including means for sending and receiving messages over said computer network in a **variable-based protocol that implements object identifier variables**;	A "variable based protocol" is a protocol that uses variables to provide information about the network being managed, allowing for an expandable, open-ended format for providing data. Under a variable based protocol, a management information base (MIB) is established for the specific system being monitored. In the MIB variables are assigned for the information to be communicated. When information is to be communicated the assigned variable representing that variable is used. If additional information needs to be conveyed, the MIB is updated so new variables are assigned	Radianse does not use a variable-based protocol. Radianse uses a fixed protocol. Radianse does not employ a management information base (MIB). Radianse does not use object identifiers as disclosed in this claim. Data from the Receiver is always sent in the same format and is sent in its entirety so there is no need to identify what data (variables) is being sent. Radianse's IPS does not perform the claimed function of "sending and receiving

	for the additional information. Messages or signals sent using a variable based protocol vary in content and length depending on the information being conveyed. An "object identifier" is a software data construct used in a computer network in which objects (such as transmitters to be located in an object location system and sensors receiving signals from those transmitters) are assigned identifiers by the network. "Object identifier variables" are variables that vary in content and length based on the information being conveyed and that are used in a variable based protocol to correspond to objects to be tracked or located. This is a "means plus function" limitation. The claimed function is "sending and receiving messages over a computer network in a variable-based protocol that implements object identifier variables." The disclosed structure is a computer network including infrared transmitters, infrared sensors, external device controllers, concentrators, and control processors or personal computers as set forth in Figs 1-5.	messages over a computer network in a variable-based protocol that implements object identifier variables." Radianse's IPS does not have the structure disclosed corresponding to that function or an equivalent structure.
a plurality of **infrared**	"Infrared sensors" are sensors	Radianse's IPS does not have

sensors for receiving transmitted **identifying codes** from the **infrared transmitters**, said plurality of infrared sensors providing signals containing the **transmitted identifying codes**; and	that receive infrared transmissions. "Identifying codes" are codes identifying a transmitter. "Infrared transmitters" are transmitters of infrared signals. "Transmitted identifying codes" are identifying codes transmitted by means of infrared signals.	"infrared sensors for receiving transmitted identifying codes from the infrared transmitters, said plurality of infrared sensors providing signals containing the transmitted identifying codes." Radianse does not use IR to transmit identifying codes. Radianse uses RF to transmit identifying codes.
interface circuitry coupling said plurality of **infrared sensors** to said computer network, said interface circuitry including means for providing to said computer network **object identifier variables** in the **variable-based protocol** corresponding to the **transmitted identifying codes** received from said signals from said plurality of infrared sensors.	See above definitions of highlighted terms. "Interface circuitry" is electronic circuitry that performs the below-stated functions contained in a "concentrator" that is connected on one side to a workstation PC and on the other side to "collectors" that are in turn connected to "sensors". This is a means plus function limitation. The claimed function is "providing to a computer network object identifier variables in a variable-based protocol corresponding to identifying codes transmitted using infrared and received by infrared sensors." The disclosed structure is set forth in Figs 1-5 and includes transmitters that employ infrared radiation to transmit codes identifying the transmitters and infrared sensors that receive such	Radianse does not have the claimed "interface circuitry." Radianse does not use concentrators. Radianse does not use collectors. Receivers themselves transmit data, which is sent directly to the Server. Radianse Receivers transmit data packets to the Radianse Server on a regular, pre-determined schedule. Radianse does not perform the claimed function. Radianse does not use the disclosed structure that performs the claimed function or an equivalent structure.

	transmissions.	
Clm. 13. A method for tracking and locating objects in a system with a computer network, a computer connected to the computer network, **infrared sensors**, and interface circuitry connecting the computer network to the infrared sensors, the infrared sensors being adapted to receive **unique identifying codes** from **infrared transmitters**, comprising the steps of:	See above for definitions of highlighted terms. A "unique identifying code" is an identifying code that identifies one and only one object in a system of multiple objects. "Unique identifying codes from infrared transmitters" are unique identifying codes transmitted using infrared by infrared transmitters.	Radianse's IPS does not use infrared sensors that are adapted to receive unique identifying codes from infrared transmitters. Radianse does not use IR to transmit identifying codes. Radianse uses RF to transmit identifying codes. Radianse does not use the claimed method.
providing **object identifier variables** in the interface circuitry, said object identifier variables adapted for being communicated over the computer network in a **variable based protocol**;	See above.	Radianse does not perform the step of providing object identifier variables in interface circuitry. Radianse does not employ a variable based protocol. Radianse uses a fixed protocol. Data from the Receiver is always sent in the same format and is sent in its entirety so there is no need to identify what data is being sent.
receiving in one of the infrared sensors a transmission from one of	See above.	Radianse does not use sensors that receive transmissions from infrared transmitters containing a unique identifying code.

the infrared transmitters containing a **unique identifying code**;		Radianse does not use IR to transmit identifying codes. Radianse uses RF to transmit identifying codes.
sending the received **unique identifying code** from the infrared sensor to the interface circuitry;	See above.	Radianse does not send a unique identifying code from a infrared sensor to interface circuitry.
providing the **unique identifying code** in the interface circuitry to the computer network in association with an **object identifier variable**; and	See above.	Radianse does not employ object identifier variables. Data from the Receiver is always sent in the same format and is sent in its entirety so there is no need to identify what data is being sent.
receiving in the computer the **unique identifying code** from the network by accessing its associated **object identifier variable**.	See above 1.	
Clm. 18. A method for tracking and locating objects in a system with a computer network, a computer connected to the computer network, **infrared sensors**, and interface circuitry connecting the computer network to the infrared sensors, the infrared sensors being adapted to	See above for definitions of highlighted terms. An "external device controller" is a controller used to control external devices.	See above.

receive **the unique identifying codes from infrared transmitters**, also for providing physical responses and the system having an **external device controller**, comprising the steps of:		
receiving in one of the **infrared sensors** a transmission from one of the **infrared transmitters** containing a **unique identifying code**;	See above for definitions of highlighted terms.	
sending the received **unique identifying code** from the **infrared sensor** to the interface circuitry;	See above for definitions of highlighted terms.	
providing the **unique identifying code** in the interface circuitry to the computer network;	See above for definitions of highlighted terms.	
receiving in the computer the **unique identifying code** from the network;	See above for definitions of highlighted terms.	
sending a message from the computer to the **external device controller**, the message containing an identification of a channel of the external device	See above for definitions of highlighted terms.	

controller instructing the external device controller to activate the channel, said message sent in response to said **unique identifying code** provided by the interface circuitry to the computer network: and		
activating in the **external device controller** the channel identified in said sending a message step in response to receiving said message sent by the computer.	See above for definitions of highlighted terms.	

C. USP RE36,791

Claim and Claim Element	Proposed Construction	Radianse System
Clm 25. A location system for locating objects within a tracking environment using **area-detection** by receivers that receive electromagnetic transmissions from **assigned areas**, **comprising**:	"Area detection" means a radiolocation system using receivers configured to detect TAG transmissions only from respective non-overlapping areas, so that signals from an object will be received by only one receiver. "Assigned areas" are areas around receivers that are configured such that the signal from an object within that area is received by only one receiver. "Comprising" means including.	Radianse does not use area detection. Radianse uses received signal strength (RSSI) to locate tags. Radianse does not configure its systems so that the signal from an object within that area is received by only one receiver. In the Radianse IPS, Receivers are deployed with overlapping areas of signal reception. RF transmissions from an ID Tag are received by multiple Receivers. The received strength (RSSI) from an ID Tag at a Receiver is proportional to the distance of the ID Tag from the Receiver. The RSSI value from an ID Tag is the primary means by which the locations of the ID Tags are determined by the Radianse system. Signals from ID Tags are received to the limit of the noise floor of the environment and the Receiver. Receivers do not have an assigned area of reception and the reception range varies with the environment.

for each object, a **TAG transmitter** for transmitting, at selected intervals, **TAG transmissions** that include a **unique TAG ID**;	A "TAG transmitter" is a transmitter attached to an object to be located. A "TAG transmission" is a transmission from a TAG transmitter. "Unique TAG ID" means an identification that is unique to a specific TAG transmitter, so that every TAG has a different identification.	
an array of receivers distributed within the tracking area, with each receiver being configured to receive TAG transmissions from an **assigned area of a predetermined size**;	"Assigned area of predetermined size" means an area surrounding a receiver that is configured in advance so that the signal from an object within that area is received only by one receiver.	Radianse does not use "assigned areas of a predetermined size." See above.

each receiver including a **data communications controller responsive to the receipt of a TAG transmission** for providing a **corresponding area-detection packet** that includes the received TAG ID; and	"Data communications controller" means a programmed controller equivalent to a diskless networked processor that controls the transmission of data over a network. "Responsive to the receipt of a TAG transmission" means providing an output resulting from the receipt of a TAG transmission. A "corresponding area-detection packet" is a packet of information provided by the data communications controller that that corresponds to the TAG transmission received from an assigned area and that includes the identification of the tag contained in the TAG transmission.	Radianse's receivers do not include data communications controllers. Radianse's receivers are not "responsive to the receipt of a TAG transmission." Radianse's receivers do not provide output resulting from or triggered by the receipt of a TAG transmission. Radianse's receivers send data packets to the Radianse Server on a regular, predetermined schedule, independent of whether or not the receivers have received signals from a TAG.
a **location processor** for receiving the **area-detection packets**, and for determining the location of each TAG, and its associated object, **based on** the identity of the receiver receiving the TAG transmissions for that TAG.	A "location processor" is a processor that determines location. An "area detection packet" is a packet of information that corresponds to a TAG transmission from an assigned area and that includes the identification of the TAG contained in the TAG transmission. "Based on" means on the basis of. The "identity of the receiver" is the assigned area in which the receiver is located.	Radianse does not have a location processor for receiving area detection packets. Radianse does not use area detection packets. Signals from ID Tags are received to the limit of the noise floor of the environment and the Receiver. Radianse does not use limited area and extended area receivers. Reception of Tag signals at a Receiver is not limited to an assigned area. There is no concept of area detection nor area detection packets.

Clm 39. The location system of claim 25, wherein the receivers are coupled to the **location processor** by a local area network, with each receiver including a **LAN** interface, such that the **area detection packets** are communicated to the location processor over the LAN.	See 25 for the construction of highlighted terms. "LAN" means local area network.	Radianse does not use area detection packets. See above.
Clm 48. A method of locating objects within a tracking environment using **area-detection** by receivers that receive electromagnetic transmissions from **assigned areas**, **comprising**:	See 25.	Radianse does not use area-detection. Radianse does not use receivers that receive transmissions from assigned areas. Signals from ID Tags are received to the limit of the noise floor of the environment and the Receiver. Reception of Tag signals at a Receiver is not limited to an assigned area.
for each object, providing a **TAG transmitter** for, at selected intervals, **TAG transmissions** that include a **unique TAG ID**;	See 25.	

providing an array of receivers distributed within the tracking area, with each receiver being configured to receive **TAG transmissions** from an **assigned area of a predetermined size**;	See 25.	Radianse's receivers are not configured to receive tag transmissions from an assigned area of a predetermined size. Signals from ID Tags are received to the limit of the noise floor of the environment and the Receiver. The distance that a Receiver can receiver signals from an ID Tag varies with the environment.
each receiver being **responsive to the receipt of a TAG transmission** for providing a **corresponding area-detection packet** that includes the received TAG ID; and	See 25.	Radianse's receivers do not provide corresponding area-detection packets. Radianse does not have the concept of area-detection nor are detection packets.
determining the location of each TAG, and its **associated object**, based on the identity of the receiver receiving the TAG transmissions for that TAG as represented by the **area-detection packet** provided by such receiver that received the TAG transmissions.	"Associated object" is the object to which the tag is attached. See 25.	See above.

a location processor for receiving the **area-detection packets**, and for determining the location of each TAG, and its associated object, based on the identity of the receiver receiving the TAG transmissions for that TAG.	See 25.	See above.
Clm. 66 A location system for locating objects within a tracking environment using area-detection by receivers that receive transmissions from assigned areas, comprising:	See 25.	
for each object, a **TAG transmitter** for transmitting at selected intervals, **TAG transmissions** that include a **unique TAG ID**;	See 25.	
an array of receivers distributed within the tracking area, with each receiver being configured to receive **TAG transmissions** from an **assigned area of a predetermined size**;	See 25.	Radianse does not use receivers configured to receive tag transmissions from assigned areas of a predetermined size. See above.

each receiver including a data communications controller responsive to the receipt of a TAG transmission for providing a **corresponding area-detection packet** that includes the received TAG ID;		Radianse does not use corresponding area-detection packets. See above.
a location processor for receiving the **area-detection packets**, and for determining the location of each TAG, and its associated object, based on the identity of the receiver receiving the TAG transmissions for that TAG; and	See 25.	See above.
a local area network, said array of receivers being coupled to the location processor by said local area network, with each receiver including a **LAN** interface, such that the **area detection packets** are communicated to the location processor over said LAN.	See 25 and 39.	See above.

D. USP 6, 154, 139

Claim and Claim Element	Proposed Claim Construction	Radianse System
Clm 1. A method for locating subjects within a tracking environment, the method **comprising** the steps of:	"Comprising" means including.	
for each **subject**, providing a **TAG** capable of transmitting a **substantially line-of-sight signal including** a **unique TAG ID substantially simultaneously** with a **substantially non-line-of-sight signal** also including the unique TAG ID;	A "subject" is an object or person to be tracked. A "TAG" is a battery-operated badge that contains a transmitter. A "substantially line of sight signal" is a signal such as an infrared signal or a visual light wave signal that will not travel through common building materials that are used to form a room in a building (wood, plaster, drywall, etc.). "Including" means containing. A "unique TAG ID" is an identification that is unique to a specific TAG. "Substantially simultaneously" means at the same time. A "subtstantially non-line-of-sight signal" is a signal such as a radio frequency signal or an ultrasonic signal that travels through common building materials that are used to form a room in a building.	Radianse does not use tags capable of transmitting a substantially line-of-sight signal including a unique tag ID. Radianse uses tags that send RF signals including a unique tag ID. Radianse's tags do not send IR signals substantially simultaneously with RF signals. The RF and IR signals sent from an ID Tag do not overlap at all. There is a time delay between the transmissions.

providing an **array** of receivers distributed within the tracking environment, wherein the array of receivers includes **an extended area receiver** for receiving a plurality of substantially non-line-of-sight signals and **a plurality of limited area receivers**, each of the limited area receivers receiving substantially line-of-sight signals;	An "array" is a grouping or arrangement. "An extended area receiver" is a single receiver that receives "substantially non-line-of-sight signals" as defined above. "A plurality of limited area receivers" means numerous receivers that receive "substantially line-of-sight signals" as defined above.	Radianse does not use extended area receivers and limited area receivers. Radianse uses a single Receiver type that is not defined by reception area. Signals from ID Tags are received to the limit of the noise floor of the environment and the Receiver. Reception of Tag signals at a Receiver is not limited to an assigned area
generating an **extended area detection packet** including the unique TAG ID in response to each received non-line-of-sight signal;	An "extended area detection packet" is a set of RF electrical signals containing the unique identification of a tag that is created in response to the receipt of a "non-line-of-sight" signal from the tag.	Radianse does not generate extended area detection packets. Radianse does not use extended area receivers and limited area receivers and therefore there is no concept of extended area or limited area packets.
generating a **limited area detection packet** including the unique TAG ID in response to each received line-of-sight signal; and	A "limited area detection packet" is a set of IR electrical signals containing the unique identification of a tag that is created in response to the receipt of a "line of sight" signal from the tag.	Radianse does not generate limited area detection packets. Radianse does not use extended area receivers and limited area receivers and therefore there is no concept of extended area or limited area packets.
determining the location of each **TAG** and its associated **subject** based on the identity of the **extended area and limited**	See above definitions of highlighted terms.	See above.

area receivers for the TAG as represented by its **extended area and limited area detection packets**.		
Clm 5. A system for locating subjects within a tracking environment, the system including:		
for each **subject**, a **TAG** capable of transmitting a **substantially line-of-sight signal** including a **unique TAG ID substantially simultaneously** with a **substantially non-line-of-sight signal** also including the **unique TAG ID**;	Highlighted terms are defined above regarding claim 1.	See above.
a receiver assembly including an **array** of receivers distributed within the tracking environment, wherein the array of receivers includes **an extended area receiver** for receiving **a plurality of substantially non-line-of-sight signals**, the receiver assembly generating an **extended area detection packet** including the **unique TAG ID** in	See 1. A "receiver assembly" is a combination of receivers, some of which are "extended area receivers" that receive only "non-line-sight" signals such as radio frequency signals, and others of which are "limited area receivers" that receive only "line-of-sight" signals such as infrared signals.	See above.

response to each received **non-line-of-sight signal**, the array of receivers also including **a plurality of limited area receivers**, each of the limited area receivers receiving substantially line-of-sight signals, the receiver assembly generating a **limited area detection packet including the unique TAG ID in response to each received line-of-sight signal;**		
a **data communications controller** coupled to the receiver assembly for collecting the **extended area and limited area detection packets**; and	A "data communications controller" is a device connected to a "receiver assembly" that collects data from the receivers in the receiver assembly consisting of the "extended area" and "limited area" detection packets.	Radianse does not use a data communications controller. Receivers themselves transmit data, which is sent directly to the Server. See above.
a **location processor coupled** to the controller for receiving the collected detection packets and for determining the location of each TAG and its associated subject based on the identity of the extended area and limited area receivers for the TAG as	A "location processor" is a computer connected to a "data communications controller."	See above.

represented by its extended area and limited area detection packets.		

Signed under the pains and penalties of perjury this 30 day of November, 2005.

Paul Tessier

Commonwealth of Massachusetts
Essex, SS:

Then appeared before me the above-named Paul Tessier and gave oath that the foregoing statements are true on the basis of this personal knowledge.

Notary Public

Dated: 11-30-05

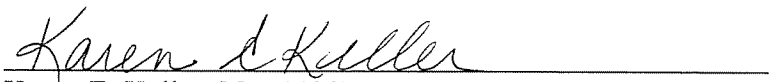
CERTIFICATE OF SERVICE

I, Karen E. Keller, Esquire, hereby certify that on December 2, 2005, I caused to be electronically filed a true and correct copy of the foregoing document with the Clerk of the Court using CM/ECF, which will send notification that such filing is available for viewing and downloading to the following counsel of record:

George Pazuniak , Esquire
Connolly Bove Lodge & Hutz LLP
The Nemours Building
1007 North Orange Street
PO Box 2207
Wilmington, DE 19899

I further certify that copies of the foregoing document were served by hand delivery on the above-listed counsel of record.

YOUNG CONAWAY STARGATT & TAYLOR, LLP



Karen E. Keller (No. 4489)
The Brandywine Building
1000 West Street, 17th Floor
Wilmington, Delaware 19801
(302) 571-6600
kkeller@ycst.com

Attorneys for Radianse, Inc.